Read Me First
Router Software 11.0
Site Manager 5.0

Router Software Version 11.0
Site Manager Software Version 5.0

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Bay Networks

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This document supplements the *Release Notes for Router Software Version 11.0*, *Release Notes for Site Manager Software Version 5.0*, and *Known Anomalies: Router Software 11.0 and Site Manager 5.0*.

It contains information about

- ISP Mode Limitation
- Launching Site Manager from HP OpenView
- Using Quick2Config to Upgrade Routers
- Upgrading Routers from Version 7-10.*xx* to Version 11.0
- Using the Online Library Version 11.0 with AIX
- IPEX Cause and Diagnostic Codes
- Updates to *Cable Guide for Routers and BNX Platforms*

ISP Mode

Release 11.0 does not fully support ISP mode. Do not set the ISP Mode parameter to anything other than the default. Do not enable this parameter without direction from Bay Networks Customer Service.

Launching Site Manager from HP OpenView

For Solaris2.*x* and HP-UX 9.*x* and 10.*x* running HP OpenView 4.00 or later, Site Manager's HP OpenView link is not created during installation. To launch Site Manager from HP OpenView, edit the */usr/wf/WFSM_INSTALL* file as follows:

1. **Make sure that you are superuser.**
2. **Open the** */usr/wf/WFSM_INSTALL* **file and locate line 216.**

   ```
   OVDIR=${OVDIR:-/usr/OV}
   ```

3. **Edit this line to read**

   ```
   OVDIR=${OVDIR:-/etc/opt/OV/share}
   ```

4. **Save the change.**
5. **Enter the following command:**

   /usr/wf/WFSM_INSTALL

Using Quick2Config to Upgrade Routers

We have revised the Quick2Config procedure for upgrading routers to include two additional steps (Steps 11 and 12). This procedure appears in the *Upgrading Routers from Version 7-10.xx to Version 11.0* manual.

1. **After you boot the router with the new version 11.0 software image, close the current Quick2Config session.**

   Select File > Exit from the main Quick2Config window.

2. **Verify that the router booted successfully with the new 11.0 software image and configuration file.**

   a. **Start the Quick2Config application.**

   b. **Select the Connect to a router on the network option (default) from the Starting Quick2Config Session Dialog box.**

   c. **Click on OK.**

      If the IP address for the router appears in the connection list, select it by double-clicking on it. Otherwise, enter the router's IP address in the IP address box and click on OK.

      The System Tab page appears. If the router booted successfully with the new 11.0 software image, the software image name appears in the System Description field and the MIB Version field.

Upgrading Routers from Version 7-10.*xx* to Version 11.0

When you upgrade existing router software to Version 11.0, you must select an upgrade platform. *Upgrading Routers from Version 7-10.xx to Version 11.0* describes the procedures for doing so on both UNIX and PCs. The 11.0 upgrade software lists the following choices:

Platform	Description
1) afnflash	Access Feeder Node
2) an	Access Node
3) asn	Access Stackable Node
4) bn	Backbone Node, including BCN and BLN routers
5) bn/vnr	Backbone Node/Virtual Network Routing
6) in	Integrated Node, special product routers
7) vme	VME router, the older line of Bay Networks routers
8) 5380/5580	Model 5380 Ethernet router or the Model 5580 Token Ring router installed on System 5000 hubs
9) 5780	Model 5780 ATM router installed on System 5000 hubs/Virtual Network Routing
10) dcm	Data collection module, updates data collection modules (not a router)

Using the Online Library Version 11.0 with AIX

The Bay Networks Online Library Version 11.0 does not include Acrobat Reader for AIX. You can download Acrobat Reader for AIX 4.1.3 or later directly from Adobe's web site at

http://www.adobe.com/acrobat/others.html

IPEX Cause and Diagnostic Codes

The following sections describe IPEX cause and diagnostic codes.

IPEX Cause and Diagnostic Codes Associated with Clear Request Packets

If IPEX receives a Disconnect Request from TCP or a Disconnect Indication from Packet Layer Protocol (PLP), IPEX forwards the packet with cause and diagnostic code transparently.

If IPEX detects an error, a Clear Request packet with IPEX specific cause and diagnostic code is generated and sent to PLP. The lists of IPEX cause and diagnostic codes follows:

IPEX Originated Cause Code in Disconnect Request Packet

IPEX_X25_CAUSE_OPERATIONAL	0x09

IPEX Originated Diagnostic Codes in Clear Request Packet

Error Condition	IPEX Cause/Diagnostic Code
TCP gate terminated.	(0x09, 0x60)
IPEX session terminated.	(0x09, 0x61)
IPEX mapping is disabled.	(0x09, 0x62)
IPEX cct is not up.	(0x09, 0x63)

IPEX Originated Diagnostic Codes Due to TCP Error

When IPEX detects a TCP error, it maps the TCP error status code into X.25 diagnostic code by adding 0x20 to TCP error status code. The Mapping Table follows.

Error Condition	TCP Error	IPEX Cause/Diagnostic Code
Disconnect is per user request.	0x64	(0x09, 0x84)
Disconnect reason is unknown to TCP.	0x65	(0x09, 0x85)
Network management deleted/disabled TCP connection.	0x66	(0x09, 0x86)
The remote TCP disconnected.	0x67	(0x09, 0x87)
TCP faulted.	0x68	(0x09, 0x88)
IP registration failed.	0x69	(0x09, 0x89)
Buffer could not be allocated.	0x6a	(0x09, 0x8a)
GAME RPC call timeout with no response.	0x6b	(0x09, 0x8b)
Another connection exists with the same socket definitions.	0x6c	(0x09, 0x8c)
The timer gate for this connection terminated unexpectedly.	0x6d	(0x09, 0x8d)
TCP quit because a maximum number of retries was reached on a (re)transmit without acknowledgment from the remote TCP system.	0x6e	(0x09, 0x8e)
The client transmit gate for this connection terminated unexpectedly.	0x6f	(0x09, 0x8f)
The client receive gate for this connection terminated unexpectedly.	0x70	(0x09, 0x90)
The IP reassembly gate for the given interface terminated.	0x71	(0x09, 0x91)
TCP protocol error occurred.	0x72	(0x09, 0x92)
Connection was idle for too long.	0x73	(0x09, 0x93)
Client was idle for too long.	0x74	(0x09, 0x94)
Out of Sequence SYN received.	0x75	(0x09, 0x95)
TCP function called from wrong gate.	0x76	(0x09, 0x96)
Normal close.	0x77	(0x09, 0x97)

Error Condition	TCP Error	IPEX Cause/Diagnostic Code
Client (Interface) error.	0x78	(0x09, 0x98)
No response to Keep Alive message.	0x79	(0x09, 0x99)

X.25 Originated Cause and Diagnostic Codes Associated with Clear Request Packets

Error Condition	Cause Code	Diagnostic Code
1. Self-clearing of virtual circuits out of order. 2. P4_frozen state, T2 expired. 3. P4_wakeup.	0x09	Maintenance action. 0x7a
Deregistration of PLP service user.	DTE originated. 0x00	Maintenance action. 0x7a
Local_calling state receives call request (DCE).	Local procedure error. 0x13	Call setup or call clearing problem. 0x40
Logical_channel_ready state receives CCALL,CCLR.	Local procedure error. 0x13	Not applicable packet in state p1 (DTE). 0x14
Logical_channel_ready state receives CCALL,CCLR.	Local procedure error. 0x13	Not applicable packet in state p2 (DCE). 0x15
P2_remote_calling state receives CALL, CCALL, CCLR, Invalid packet.	Local procedure error. 0x13	Not applicable packet in state p3 (DTE). 0x16
P2_local_calling state receives CCLR, Invalid packet.	Local procedure error. 0x13	Not applicable packet in state p3 (DCE). 0x16

Error Condition	Cause Code	Diagnostic Code
Local_calling state receives CCLR, Invalid packet.	Local procedure error. 0x13	Not applicable packet in state p2 (DCE). 0x15
P4 state receives CALL,CCALL,CCLR.	Local procedure error. 0x13	Not applicable packet in state p4. 0x17
P2_collision state receives CALL,CCLR, invalid.	Local procedure error. 0x13	Not applicable packet in state p5. 0x18
P2_remote_clearing state receives CALL, CCALL, CCLR, invalid.	Local procedure error. 0x13	Not applicable packet in state p6 (DCE). 0x19
P2_remote_clearing state receives CALL, CCLR, CCALL invalid.	Local procedure error. 0x13	Not applicable packet in state p7 (DTE). 0x20
P2_local_calling state watch T2 expired.	Local procedure error. 0x13	Call connected watchdog timer expired. 0x31
P2_local_clearing state T1 expired.	Local procedure error. 0x13	Clear confirm first watchdog timer expired. 0x32
P2_SVC_setup state T1 expired.	Local procedure error. 0x13	Reset confirm second watchdog timer expired. 0x33
Error in PLP2.	Local procedure error. 0x13	Unidentifiable packet. 0x21 (33)
Error in PLP2.	Local procedure error. 0x13	Packet too short. 0x26 (38)
Error in PLP2.	Local procedure error. 0x13	Packet too long. 0x27 (39)

Error Condition	Cause Code	Diagnostic Code
Error in PLP2.	Local procedure error. 0x13	Non-zero LCN. 0x29 (41)
Error in PLP2.	Local procedure error. 0x13	Not applicable packet in state px. 0x13 + px
Error in PLP2.	Local procedure error. 0x13	Improper cause code from DTE. 0x51 (82)
Error in PLP2.	Local procedure error. 0x13	Not acceptable intermediate packet length. 0X40 (64)
Error in PLP2.	Local procedure error. 0x13	Packet does not conform to requested facility. 0x2a
Error in PLP2.	Local procedure error. 0x13	Non-zero address length field. 0x4a
Error in PLP2.	Unknown called address. 0x0d	Null. 0x00
Error in PLP2.	Local procedure error. 0x13	Invalid called DTE address. 0x43
Error in PLP2.	Local procedure error. 0x13	Invalid calling DTE address. 0x44
Error in PLP2.	Invalid facility request. 0x03	Unknown facility code. 0x41
Error in PLP2.	Local procedure error. 0x13	Duplicated facility code. 0x49

Error Condition	Cause Code	Diagnostic Code
Error in PLP2.	Invalid facility request. 0x03	Facility parameter not allowed. 0x42
Error in PLP2.	Local procedure error. 0x13	Exceeding facility length. 0x45
Error in PLP2.	Access barred. 0x0b	Not bidirectional or incoming LC. 0x46
Error in PLP2.	Access barred. 0x0b	Null. 0x00
Error in p1_local_restart.	Invalid facility. 0x03	Facility service not available. 0x4d
Negotiation Error in call request packet in p1 state.	Local procedure error. 0x13	Facility parameter not allowed. 0x42
p2_remote_calling state timer expired.	Out of order. 0x09	Call setup or clearing problem. 0x40
p2_local_calling state zt4 expired.	Local procedure error. 0x13	Call setup or clearing problem. 0x40

X.25 Originated Cause and Diagnostic Codes Associated with Restart Packets

Error Condition	Cause Code	Diagnostic Code
Invalid event in state r1.	Local procedure error. 0x01	Packet type invalid for r1. 0x11 (17)
Invalid event in state r2.	Local procedure error. 0x01	Packet not applicable in state r2 (DCE). 0x12 (18)
Invalid event in state r3.	Local procedure error. 0x01	Packet not applicable in state r3 (DTE). 0x13 (19)
Local Restart state, watchdog timer expiration.	Local procedure error. 0x01	Confirmation first watchdog timer expired. 0x34 (52)
Error in p1_local_restart.	Local procedure error. 0x01	Reject supported but not subscribed to. 0x21 (33)
Error in p1_local_restart.	Local procedure error. 0x01	Unidentifiable packet. 0x21 (33)
Error in p1_local_restart.	Local procedure error. 0x01	Packet too short. 0x26 (38)
Error in p1_local_restart.	Local procedure error. 0x01	Packet too long. 0x27 (39)
Error in p1_local_restart.	Local procedure error. 0x01	Non-zero LCN. 0x29 (41)
Invalid packet.	Local procedure error. 0x01	Packet not applicable packet in state r2. 0x12 (18)

Error Condition	Cause Code	Diagnostic Code
In P1 restart local/remote state receives Reset Ind.	Network Operational. 0x07	No additional information. 0x00
In P1 DTE_DXE_wait state receives error packet or T4 expired.	DTE originated. 0x00	No additional information. 0x00

X.25 Originated Cause and Diagnostic Codes Associated with Diagnostic Packets

Error Condition	Cause Code	Diagnostic Code
Local restart state, second watchdog timer expired.	DTE originated. 0x00	Confirmation watchdog second timer expired. 0x34 (52)
Invalid packet in p1.	DTE originated. 0x00	Unidentifiable packet. 0x21 (40)
Invalid packet in p1.	DTE originated. 0x00	Packet too short. 0x26 (38)
Invalid packet in p1.	DTE originated. 0x00	Invalid bits 5-8 (GFI). 0x28 (40)
Invalid packet in p1.	DTE originated. 0x00	Invalid LCN. 0x24 (40)
Invalid packet in p1.	DTE originated. 0x00	Packet too long. 0x27 (39)
P2_local_clearing state. Clear confirm second watchdog timer expired.	DTE originated. 0x00	Clear confirm watchdog second timer expired. 0x32

X.25 Originated Cause and Diagnostic Codes Associated with Reset Packets

Error Condition	Cause Code	Diagnostic Code
Local Restart state.	User defined. 0xxx	User defined. 0xxx
1. P3_local_reset state T1 expired. 2. P4_disabled-T1 expired.	Local procedure error. 0x05	Confirmation watchdog first timer expiration. 0x33 (51)
P3_flow_control_ready state received Reset Confirm.	Local procedure error. 0x05	Packet not applicable in state d1. 0x1b (27)
P3 _remote_reset state received Reset Confirm or invalid packet.	Local procedure error. 0x05	Packet not applicable in state d2 (DCE). 0x1c (28)
P3_local reset state received Reset Confirm.	Local procedure error. 0x05	Packet not applicable n state d3 (DTE). 0x1d (29)
1. Error in p3_local_reset. 2. Error in P4_disabled.	Local procedure error. 0x05	Unidentifiable packet. 0x21 (33)
1. Error in p3_local_reset. 2. Error in p4_disabled.	Local procedure error. 0x05	Reject but not subscribed to. 0x25 (37)
1. Error in p3_local_reset. 2. Error in p4_disabled.	Local procedure error. 0x05	Packet too short. 0x26 (38)
1. Error in p3_local_reset. 2. Error in p4_disabled.	Local procedure error. 0x05	Packet too long. 0x27 (39)
1. Error in p3_local_reset. 2. Error in p4_disabled.	Local procedure error. 0x05	Non-zero LCN. 0x29 (41)

Error Condition	Cause Code	Diagnostic Code
Error in p3_local_reset.	Local procedure error. 0x05	Packet not applicable in state dx (DCE). 0x1c
Error in p3_local_reset.	Local procedure error. 0x05	Packet not applicable in state dx (DTE). 0x1d
1. Error in p3_local_reset. 2. Error in p4_disabled.	Local procedure error. 0x05	Forbidden packet on PVC. 0x23
Error in p3_local_reset.	Local procedure error. 0x05	Bad PS. 0x01
Error in p3_local_reset.	Local procedure error. 0x05	Bad PR. 0x02
Error in p3_local_reset.	Local procedure error. 0x05	Bad Q bit. 0x53
Error in p3_local_reset.	Local procedure error. 0x05	Improper case code from DTE. 0x51
INTR in p5_remote_interrup state.	Local procedure error. 0x05	Interrupt packet not applicable in this state. 0x2c
CINTR in p5_remote_interrup state.	Local procedure error. 0x05	Interrupt confirm packet not applicable in this state. 0x2b
CINTR in p5_remote_interrup state.	Not usable PVC. 0x1d	Not used. 0x00

Error Condition	Cause Code	Diagnostic Code
Error in p4_disabled bad ps, pr, q bit, cause.	Network disorder.	Not used. 0x00
Error in p4_disabled timer. Reset confirm. Second watchdog timer expired.	Not used. 0x00	Reset confirm. Second watchdog timer expired. 0x33

Updates to *Cable Guide for Routers and BNX Platforms*

We have made several updates to *Cable Guide for Routers and BNX Platforms.* The latest version of this book has the part number 114072 Rev. B. An earlier version of the book, with part number 114072 Rev. A, appears in initial shipments of the documentation and on the *Online Library* Version 11.0 CD.

You can view the latest version of *Cable Guide for Routers and BNX Platforms* on the Bay Networks Web site at

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